

Notice of Allowability	Application No.	Applicant(s)	
	10/620,018	MERKEL ET AL.	
	Examiner	Art Unit	
	Ngoc-Yen M. Nguyen	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to November 20, 2007.
2. ☒ The allowed claim(s) is/are 23-38.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
|---|--|

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Jimmie Johnson on January 2, 2008.

The application has been amended as follows:

Claim 23 (currently amended): A method of recovering anhydrous hydrogen fluoride from an azeotrope or azeotrope-like mixture comprising hydrogen fluoride and a halogenated hydrocarbon comprising:

providing an azeotrope or azeotrope-like mixture comprising hydrogen fluoride and at least one halogenated hydrocarbon;

extracting hydrogen fluoride from said mixture by contacting said mixture with a solution comprising from about 65 to ~~about~~ less than 93 wt.% sulfuric acid in water; and

subjecting the hydrogen fluoride extracted in said extraction step to flash distillation followed by the column fractionation distillation to produce anhydrous hydrogen fluoride containing less than 200 ppm of sulfur impurities.

Claim 27 (Currently amended): A method of recovering anhydrous hydrogen fluoride from a mixture comprising hydrogen fluoride and a halogenated hydrocarbon comprising:

providing a mixture comprising hydrogen fluoride and at least one halogenated hydrocarbon selected from the group consisting of hydrochlorofluorocarbons, hydrochlorocarbons, and combinations thereof;

extracting hydrogen fluoride from said mixture by contacting said mixture with a solution comprising from about 65 to ~~about~~ less than 93 wt.% sulfuric acid in water;

and

subjecting the hydrogen fluoride extracted in said extraction step to flash distillation followed by the column fractionation distillation to produce anhydrous hydrogen fluoride containing less than 200 ppm of sulfur impurities.

The declaration under 37 CFR 1.132 filed November 20, 2007 is sufficient to overcome the rejection of claims 1-36, 37 based upon GB '018 in view of Swain and Belter applied under 35 U.S.C. 103.

The declaration has effectively shown that the use of both flash distillation and column fractional distillation in the claimed process, in combination with the use of lower concentration of sulfuric acid will give the unexpected result of reducing the sulfur impurities amount in the HF product to lower than 200 ppm.

The following is an examiner's statement of reasons for allowance: the prior art does not teach or suggest a process for recovering anhydrous hydrogen fluoride by using a sulfuric acid having a concentration from about 65 to less than 93 wt.% in combination with using both flash distillation and column fractional distillation to lower the amount of sulfur impurities in the HF to less than 200 ppm. Claims 37 is allowable for the same reason as stated in the previous office action for now cancelled claim 21.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc-Yen M. Nguyen whose telephone number is (571) 272-1356. The examiner can normally be reached on Part time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/620,018
Art Unit: 1793

Page 5

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Ngoc-Yen M. Nguyen
Primary Examiner
Art Unit 1793

nmn
January 4, 2008